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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/918,037	07/30/2001	John Arnold Bell	Bell-1 (1032-01)	9830
7590		11/17/2004	EXAMINER	
Lester H. Brimbaum		PAYNE, DAVID C		
2159 Greenmeadow Drive		ART UNIT		
Macungie, PA 18062		PAPER NUMBER		
		2633		

DATE MAILED: 11/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/918,037

Applicant(s)

BELL, JOHN ARNOLD

Examiner

David C. Payne

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 30 July 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

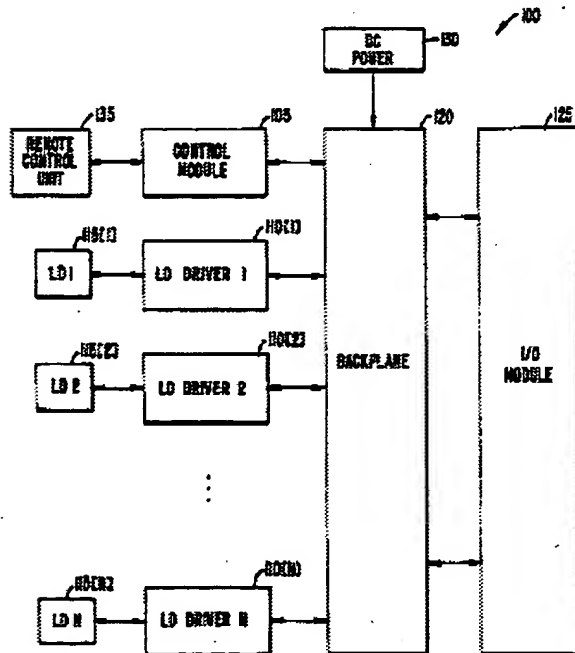
**DETAILED ACTION****Claim Rejections - 35 USC § 102**

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-5, 10, 11, 13-16, and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Liang et al. US 5,604,757 (Liang).



**FIG. 1.**

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Re claim 1,

Liang disclosed

A system for remotely controlling the output of one or more optical components comprising (a) a first optical component (*115 of Figure 1*); (b) a microcontroller (*105 of Figure 1*) connected to said first optical component adapted to monitor output information (*e.g., col./lines: 5/22-25*) from said first optical component; (c) a databus (*335 of Figure 3, e.g., col./lines: 4/57-62*) connected to said microcontroller and adapted to convey the output information (*e.g., col./lines: 5/25-30*) to a remote user (*e.g., col./lines: 2/14-17*).

Re claim 2,

Liang disclosed

wherein said microcontroller and said databus are adapted to allow a remote user to control the output power (*e.g., col./lines: 10/2-5*) of said first optical component.

Re claim 3,

Liang disclosed

wherein the first optical component is an optical transmitter (*115 of Figure 1*).

Re claim 4,

Liang disclosed

wherein said microcontroller and said databus are adapted to allow a remote user to control the output power (*e.g., col./lines: 10/2-5*) of said optical transmitter.

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Re claim 5,

Liang disclosed

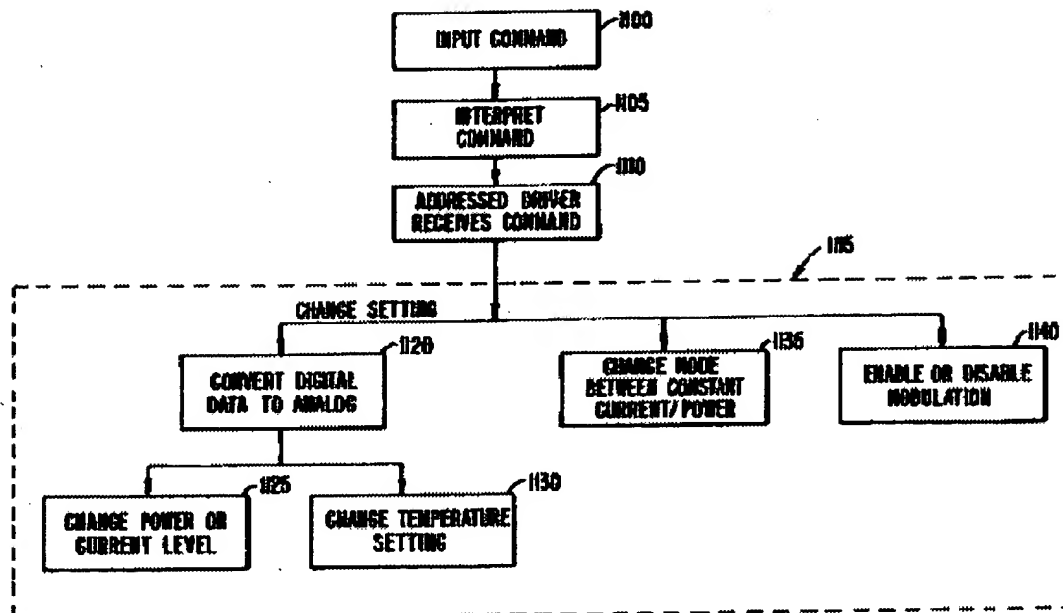


FIG. 11.

wherein said optical transmitter includes a laser (115 of Figure 1) whose performance is affected by a bias current (*e.g.*, *col./lines: 5/25-30, see note at end of paragraph*) and by its temperature (*e.g.*, *col./lines: 10/2-5*); and wherein said microcontroller and said databus are adapted to allow a remote user to control the laser bias current and the laser temperature of said optical transmitter (*e.g.*, *col./lines: 8/30-37*). While Liang is not explicit in mentioning

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bias current, it is inherent that the disclosed "bias voltage" across the laser diode, in the passage noted above, produces a bias current disclosed as the operating current of the laser diode in col./lines: 7/31-35. Kirchoff's current law,  $\text{Current (I)} = \text{Voltage (E)} / \text{Resistance (R)}$  is extremely well known in the art.

Re claim 10,

Liang disclosed

A method for remotely controlling the output of an optical component having one or more performance characteristics consisting of (a) connecting a microcontroller (*105 of Figure 1*) to said optical component (*10/25-30*); (b) using said microcontroller to monitor one or more performance characteristics of said optical component (*e.g., col./lines: 5/25-30*); (c) monitoring the one or more performance characteristics of said optical component (*e.g., col./lines: 5/22-25*); (d) determining if any of the one or more performance characteristics of said optical component needs to be changed (*e.g., col./lines: 10/52-62*), and (d) using said microcontroller to change the one or more performance characteristics of said optical component (*e.g., col./lines: 10/25-30*).

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Re claim 11,

Liang disclosed

including the additional step of sending a command to said microcontroller instructing said microcontroller to begin the monitoring step. (*e.g., col./lines: 12/11-20*).

Re claim 13,

Liang disclosed

including the additional step of sending a command from the microcontroller to said optical component to cause the change to the one or more performance characteristics of said optical component. (*e.g., setting the operating current, col./lines: 10/35-44*)

Re claim 14,

Liang disclosed

wherein the additional step of sending said command includes sending voltages or currents to the optical component. (*e.g., col./lines: 10/52-62*)

Re claim 15,

Liang disclosed

including the additional step of causing the microcontroller to monitor the one or more performance characteristics of said optical component after said command is sent. (*e.g., col./lines: 12/17-20, "Similar to the commands described above, microcontroller 300 generates appropriate control signals to carry out this command in step 1105, ..."*).

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Re claim 16,

Liang disclosed

wherein said optical component comprises an optical transmitter. (*115 of Figure 1*).

Re claim 18,

Liang disclosed wherein said optical component is selected from the group consisting of an optical modulator, an optical multiplexer, an optical demultiplexer, an optical switch, an optical power splitter, an optical power combiner, an optical amplifier, an optical polarizer, an optical circulator, an optical laser module (*115 of Figure 1*), and an optical transceiver.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Liang et al. US 5,604,757 (Liang) in view of Seebeck et al. US 6,657,005 A (Seebeck).



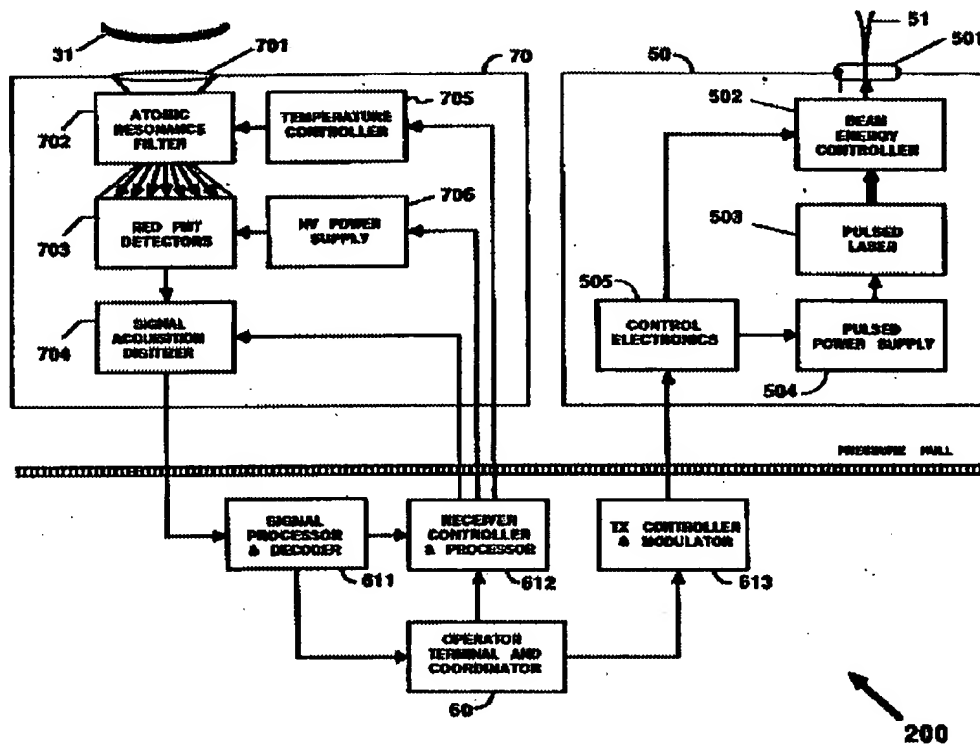
Re claim 12,

Liang disclosed the remote control system as discussed above but does not disclose the additional step of receiving information back from said micro-controller. Al-Araji disclosed a remote controller (*1 of Figure 1*) that receives verification data (*e.g., col./lines: 4/25-30*) back from the controlled device (*3 of Figure 1*). It would have been obvious to one of ordinary skill in the art the time of invention to transfer verification back to the remote controller in order to remove any uncertainty of as to the momentary status of the current system values, rule out fictive or faulty inputs, or transmission errors, see Seebeck (*e.g., col./lines: 2/18-25*).

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5. Claims 6-9, 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liang et al.

US 5,604,757 (Liang) in view of Titterton et al. US 5,038,406 (Titterton).



Re claims 6, 8 and 17

Liang as taught does not disclose

wherein the first optical component is an optical receiver.

Titterton disclosed of a method a user controlling the performance capabilities in a optical receiver (70 of Figure 3, e.g., col./lines: 9/61-67). It would have been obvious to one of ordinary skill in the art at the time of invention to remotely control a receiver in the Liang invention, as does Titterton. One is motivated as such since adjusting a receiver parameter such as the voltage supply can increase the sensitivity of the receiver and improve its ability to capture a weak signal from a distant or low power transmitter.

Re claim 7,

Given that the teachings of Liang have been modified by the combination with receiver of Titterton, the exact connection between the microcontroller, databus and receiver are not disclosed. However, it would have been obvious to one of ordinary skill in the art at the time of invention that a transmitter formed from the transmitter of Liang and receiver of Titterton would utilize the aforementioned microcontroller in Liang to control the voltage of the receiver as for the parameters of the transmitter to facilitate changes in monitoring and changes in operating parameters.

Re claim 9,

Liang disclosed

A transponder (*115 of Figure 1, col./line: 5/50-55*) including (a) a transmitter (*same laser diode of 115*) having an output; (c) one or more other optical components, each of which has an output (*multiple laser diodes of Figure 1*); (d) a microcontroller (*105 of Figure 1*) adapted to allow a user to remotely monitor and control one or more of the outputs of said transmitter (*115 of Figure 1*), and said one or more other optical components (*multiple laser diodes of Figure 1*). Liang does not disclose a (b) a receiver having an output; and said receiver under remote control. Titterton disclosed of a method a user controlling the performance capabilities in a optical receiver (*70 of Figure 3, e.g., col./lines: 9/61-67*). It would have been obvious to one of ordinary skill in the art at the time of invention to remotely control a receiver in the Liang invention, as does Titterton. One is motivated as such since adjusting a

receiver parameter such as the voltage supply can increase the sensitivity of the receiver and improve its ability to capture a weak signal from a distant or low power transmitter.

6. Claims 19-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liang et al. US 5,604,757 (Liang) in view of Al-Araji et al. US 6,559,756 B2 (Al-Araji).

Re claim 19

Liang disclosed the aforementioned invention, but does not disclose including the additional steps of setting a threshold level for said one or more performance characteristics and determining if said threshold level is reached. Al-Araji disclosed the operating determining the “red zone” or predetermined threshold for signal levels (*e.g.*, *col./line: 7/55-65, 8/1-5*). It would have been obvious to one of ordinary skill in the art at the time of invention to set threshold levels for operating points in the Liang invention as did Al-Araji. One is motivated as such so that operators could choose the optimum operating points for a transceiver, which could vary depending on environment, and specific device characteristics.

Re claims 20 and 21,

The modified invention of Liang and Al-Araji as discussed above also disclosed the additional step of creating an alarm signal for one or more of the threshold levels of said one or more performance characteristics and triggering an alarm if one or more performance

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characteristics rises above its threshold level (*e.g.*, *col./line*: 7/50-55, 8/5-15).

Re claim 22,

The modified invention of Liang and Al-Araji as discussed above also disclosed the additional step of using the microcontroller to sense the triggering of the alarm and using the microcontroller to send a signal to the user when the alarm is triggered (*e.g.*, *col./line*: 5/4-10, 5/14-20).

Re claim 23,

The modified invention of Liang and Al-Araji as discussed above also disclosed the additional step of changing one or more of the threshold levels. (*e.g.*, *col./line*: 7/55-65, 8/1-5, 9/10-15).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David C. Payne whose telephone number is (571) 272-3024. The examiner can normally be reached on M-F, 7a-4p.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dcp

A handwritten signature in black ink, appearing to read "David C. Payne". The signature is fluid and cursive, with a long horizontal stroke at the end.

David C. Payne  
Patent Examiner  
AU 2633